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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,138	11/13/2003	Keiichi Sakuno	0020-5190P	6231
2292	7590	09/21/2004	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			NGUYEN, KHANH V	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/706,138

Applicant(s)

SAKUNO, KEIICHI

Examiner

Khanh V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/13/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Therefore, "*a power amplifier and a negative feedback circuit connected between a **grounding terminal** of the power amplifier and **ground***" in claim 1 must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear which "power amplifier and a negative feedback circuit connected between a grounding terminal of the power amplifier and ground" since none of the disclosed figures showing the circuit having the connection as claimed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furino (6,452,452), applicant admitted Prior Art.

Regarding claims 1, 2, Furino discloses the claimed invention except the impedance of the negative feedback depends on a signal voltage occurring across the negative feedback circuit. Furino (Fig. 3) discloses an amplifier circuit comprising: a power amplifier (30) and a negative feedback circuit comprises diode (50) and capacitor (60) connected in series. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have change the component value of the feedback circuit (50, 60) to obtain a desired change of the impedance of the feedback.

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And likewise, increase the input signal would have resulted in the increase of the feedback impedance.

Regarding claim 3, wherein diode (50) and capacitor (60) connected in series; grounded controllable current source (40) which can be read as resistor; and a bias power supply ( $V_{cc}$ ).

Regarding claims 4, 6, it is known in the art that diode and diode-connected transistor are equivalent, wherein the transistor can be either bipolar or field transistors.

Regarding claim 5, wherein the power amplifier is a bipolar transistor and has inherent characteristics.

Regarding claim 7, only specifies intended use of the invention which are not given any patentable weight as they do not materially effect to the final product claimed.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carney et al. (3,098,199).

Regarding claims 1, 2, Carney et al. disclose the claimed invention except the impedance of the negative feedback depends on a signal voltage occurring across the negative feedback circuit. Carney et al. (Fig. 1) disclose an amplifier circuit comprising: a power amplifier (10) and a negative feedback circuit comprises diodes (24, 25) and capacitors (22, 23) connected in series. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have change the component value of the feedback circuit (50, 60) to obtain a desired change of the

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impedance of the feedback. And likewise, increase the input signal would have resulted in the increase of the feedback impedance.

Regarding claim 3, wherein diode (22) and capacitor (24) connected in series; grounded resistor (26); and a bias power supply (16).

Regarding claims 4, 6, it is known in the art that diode and diode-connected transistor are equivalent, wherein the transistor can be either bipolar or field transistors.

Regarding claim 5, wherein the power amplifier is a bipolar transistor and has inherent characteristics.

Regarding claim 7, only specifies intended use of the invention which are not given any patentable weight as they do not materially effect to the final product claimed.

Claims 1, 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nasserbakht (5,914,640), applicant admitted Prior Art.

Nasserbakht discloses the claimed invention except the impedance of the negative feedback depends on a signal voltage occurring across the negative feedback circuit. Nasserbakht (Figs. 1-3) discloses an amplifier circuit comprising: a power amplifier (110) and a negative feedback circuit (120). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have change the component value of the feedback circuit (120) to obtain a desired change of the impedance of the feedback. And likewise, increase the input signal would result in the increase of the feedback impedance.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (571) 272-1767. The examiner can normally be reached from 8:00 AM - 3:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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**KHANH V. NGUYEN  
PRIMARY EXAMINER**